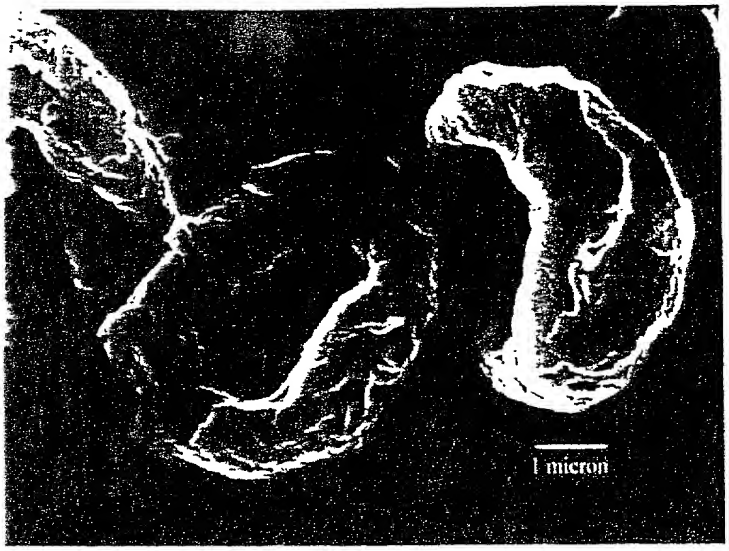

Fig. 1

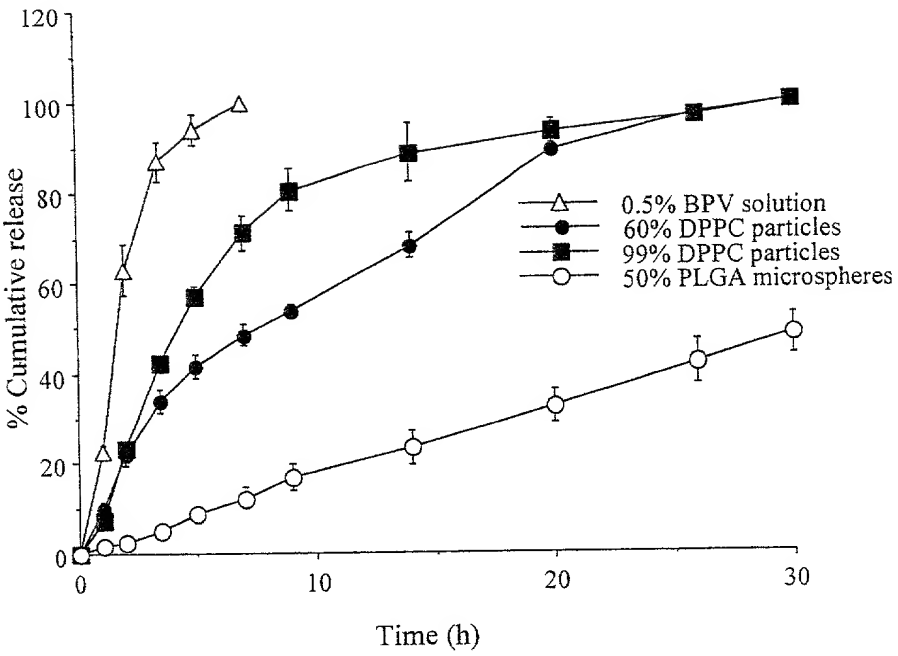

Fig 2

Patent Application Publication

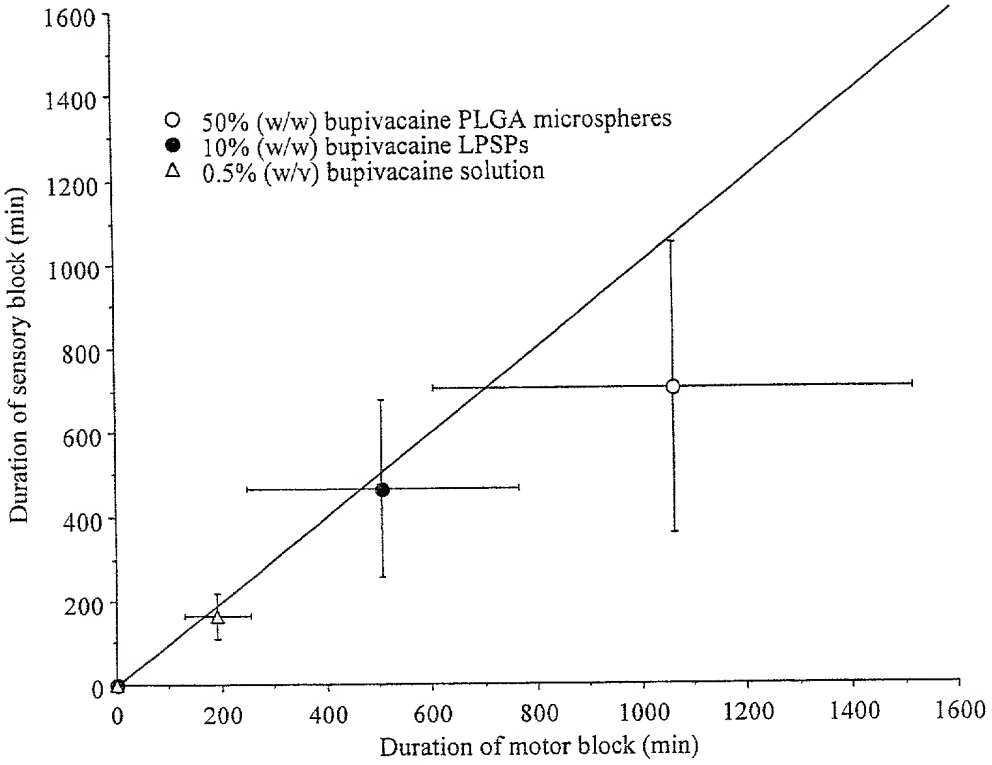
1600
1400
1200
1000
800
600
400
200
0
Duration of sensory block (min)
50% (w/w) bupivacaine PLGA microspheres
10% (w/w) bupivacaine LPSPs
0.5% (w/v) bupivacaine solution
0
200
400
600
800
1000
1200
1400
1600
Duration of motor block (min)

Fig 3

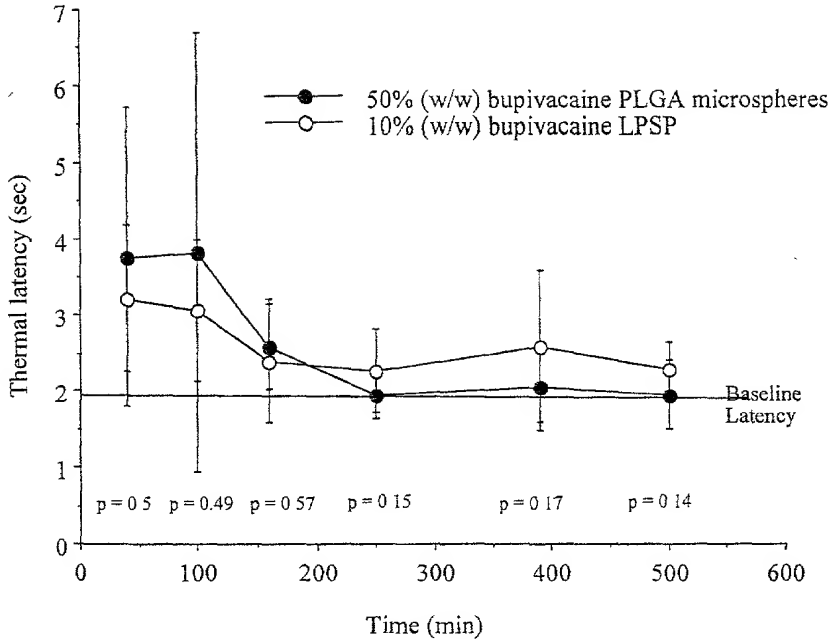

Fig 4

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Fig 5

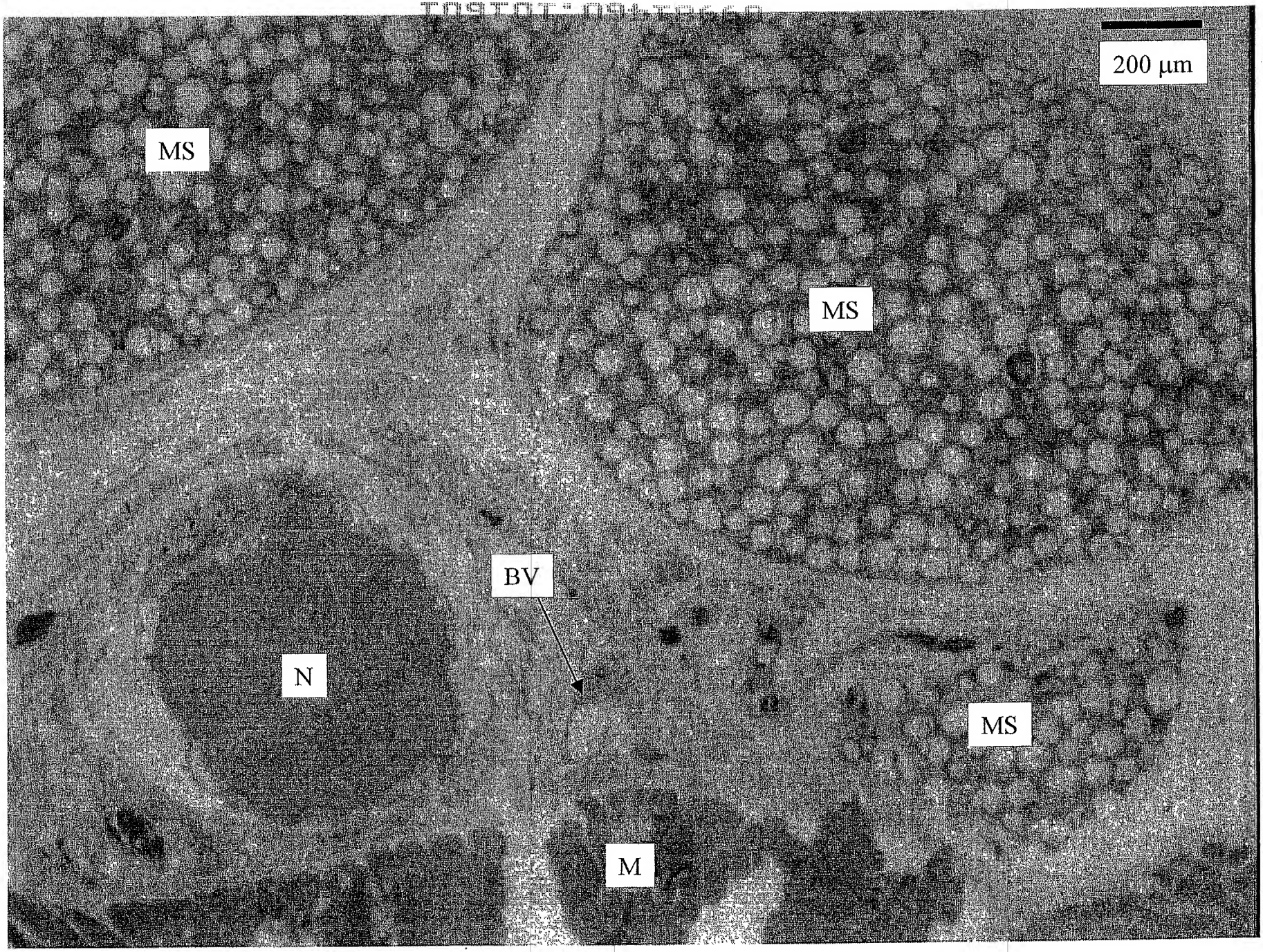

Fig. 6

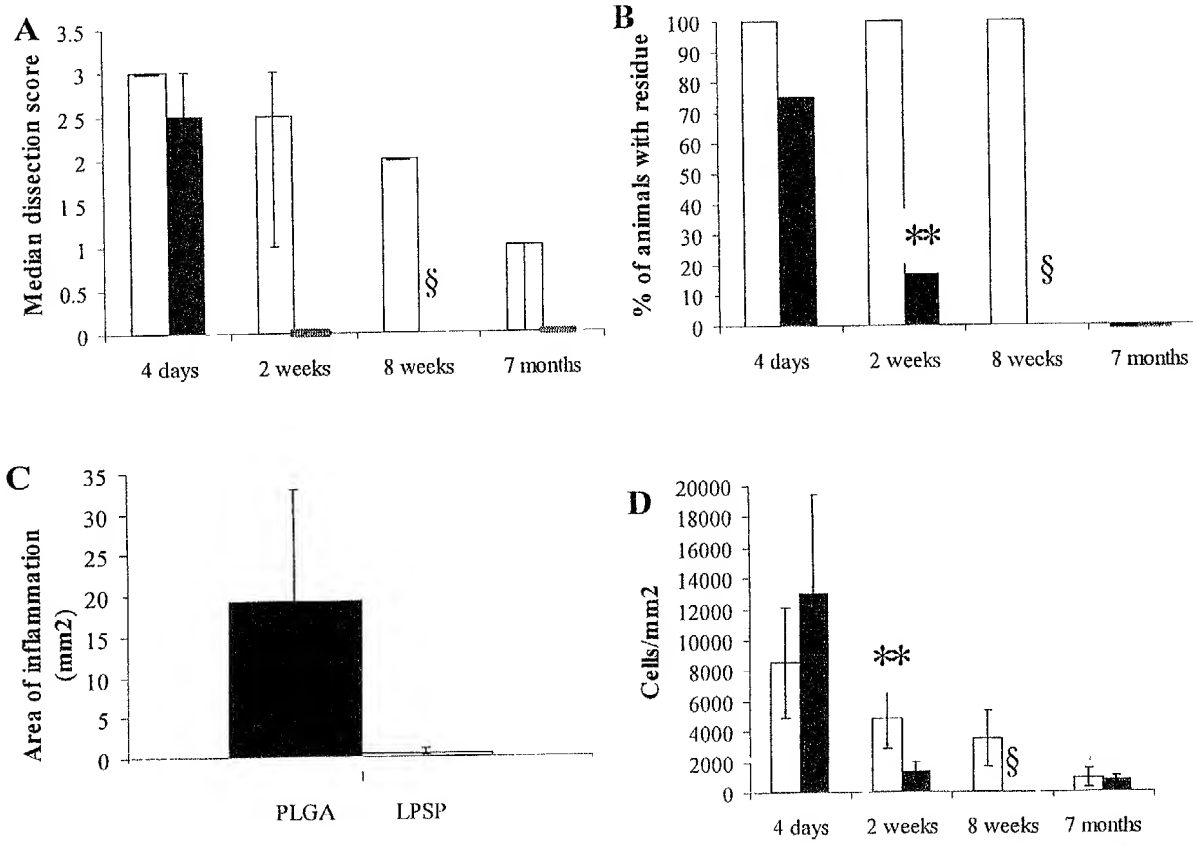

Fig. 7

0961460 .102601

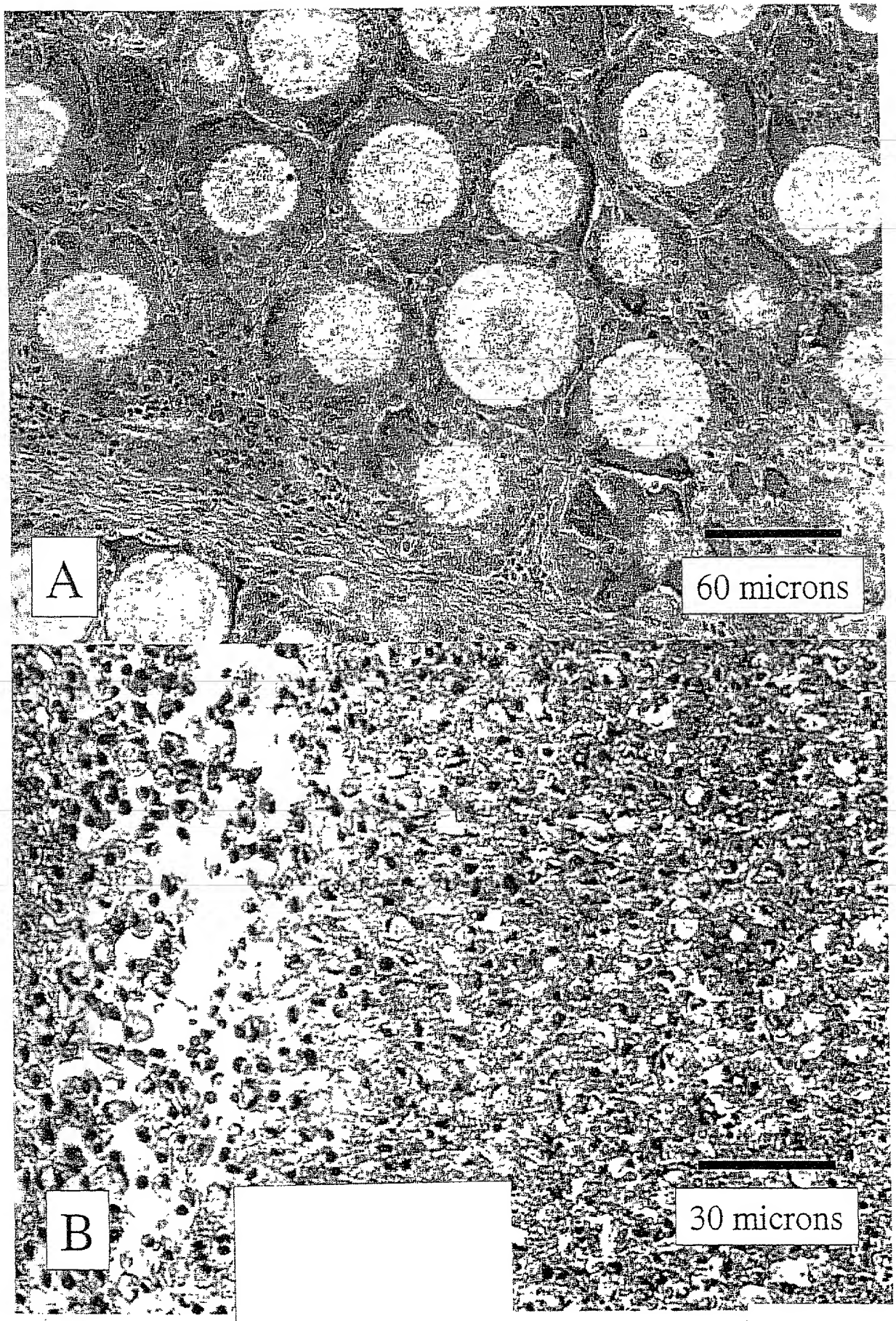

Fig. 8

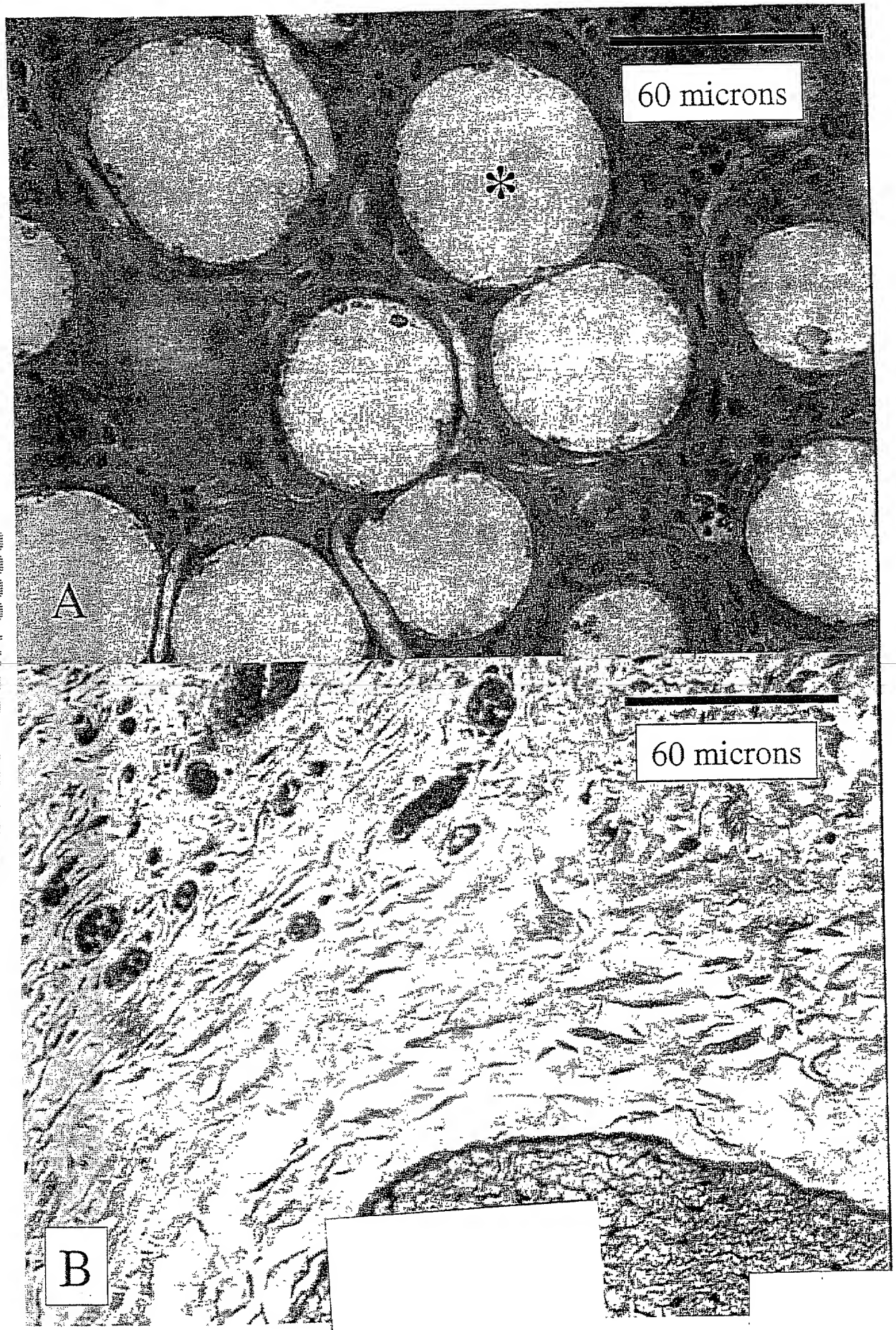

Fig 9

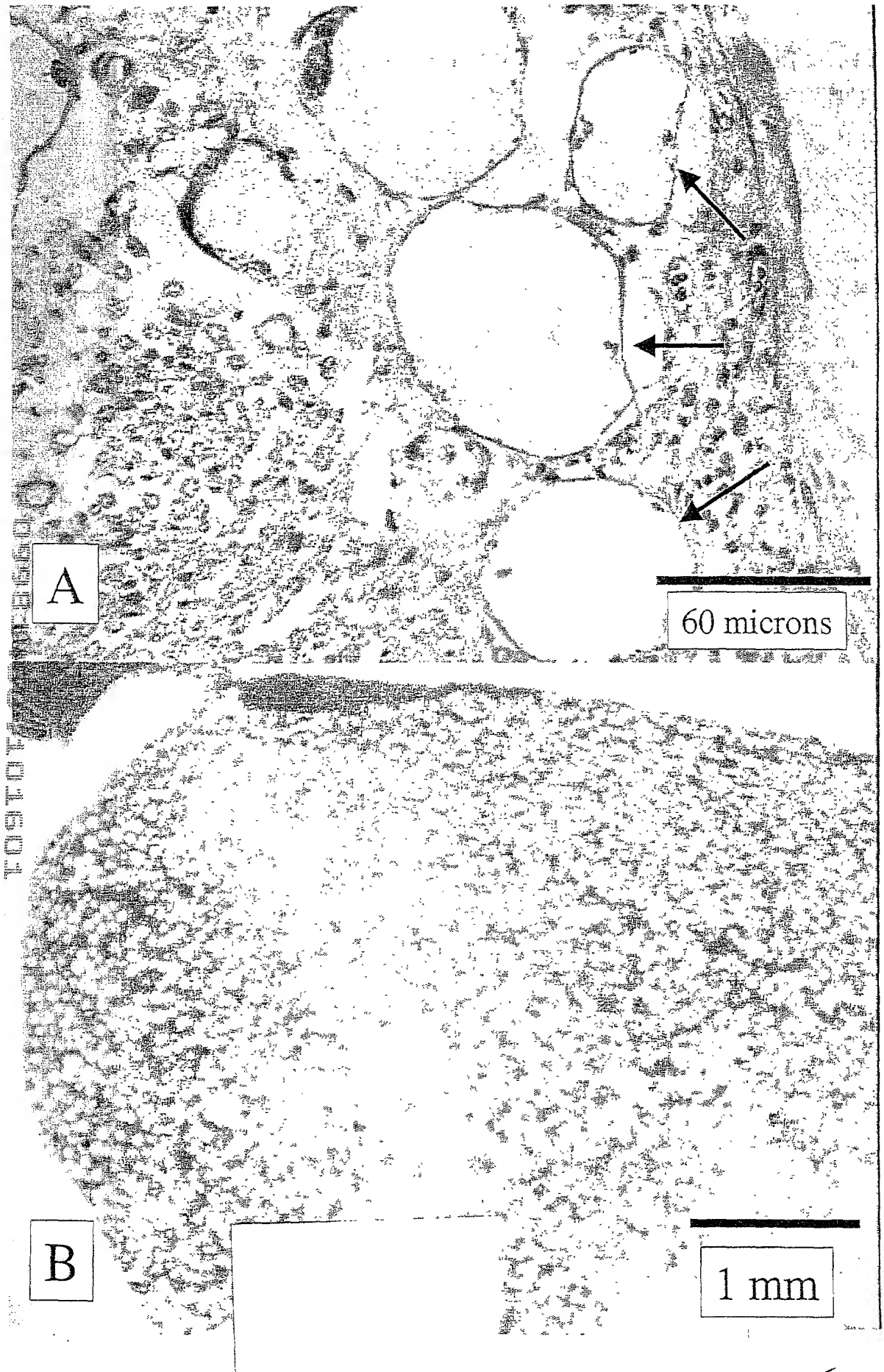

Fig. 10

In this embodiment, dipalmitoylphosphatidylcholine was dissolved in ethanol, lactose, albumin, and DNA (the gene for beta-galactosidase) were dissolved in water. The two solutions were mixed, and spray dried. The resulting particles ("DNA particles" below) were then analyzed.

In the following experiment, 5mg of DNA particles were incubated at 37C in the presence of 1.5mls of phosphate buffered saline (PBS) under mild agitation. The particles were then isolated by centrifugation and then the DNA was extracted by the addition of 100 microlitres of 2% SDS solution, followed by 100 micolitres of phenol/chloroform. 30 microlitres of the aqueous phase was added to 5 microlitres of DNA gel loading buffer, and loaded onto a 0.8% agarose gel containing ethidium bromide. The gel was run at 80 volts for ~1.5 hrs, and a picture was taken under UV illumination using a digital camera.

This gel clearly demonstrates that after one hour of shaking in the presence of PBS, DNA is still retained in the particles. Furthermore, this DNA is largely undamaged, indicating that the DNA encapsulation procedure used does not significantly damage the DNA.

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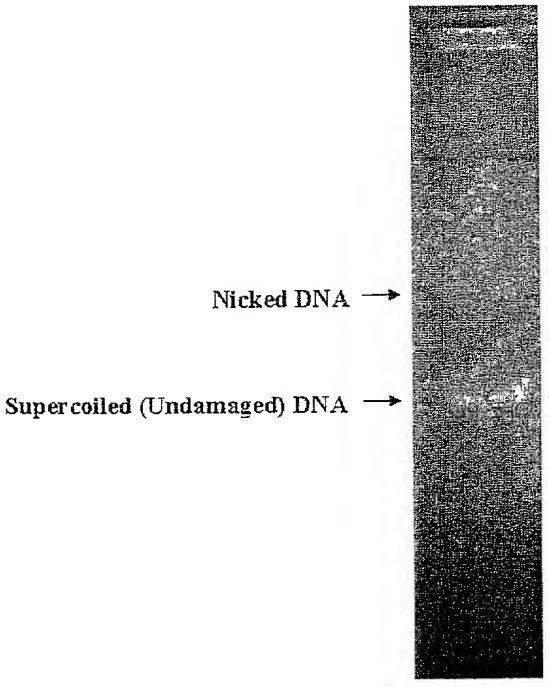

Fig. 11